

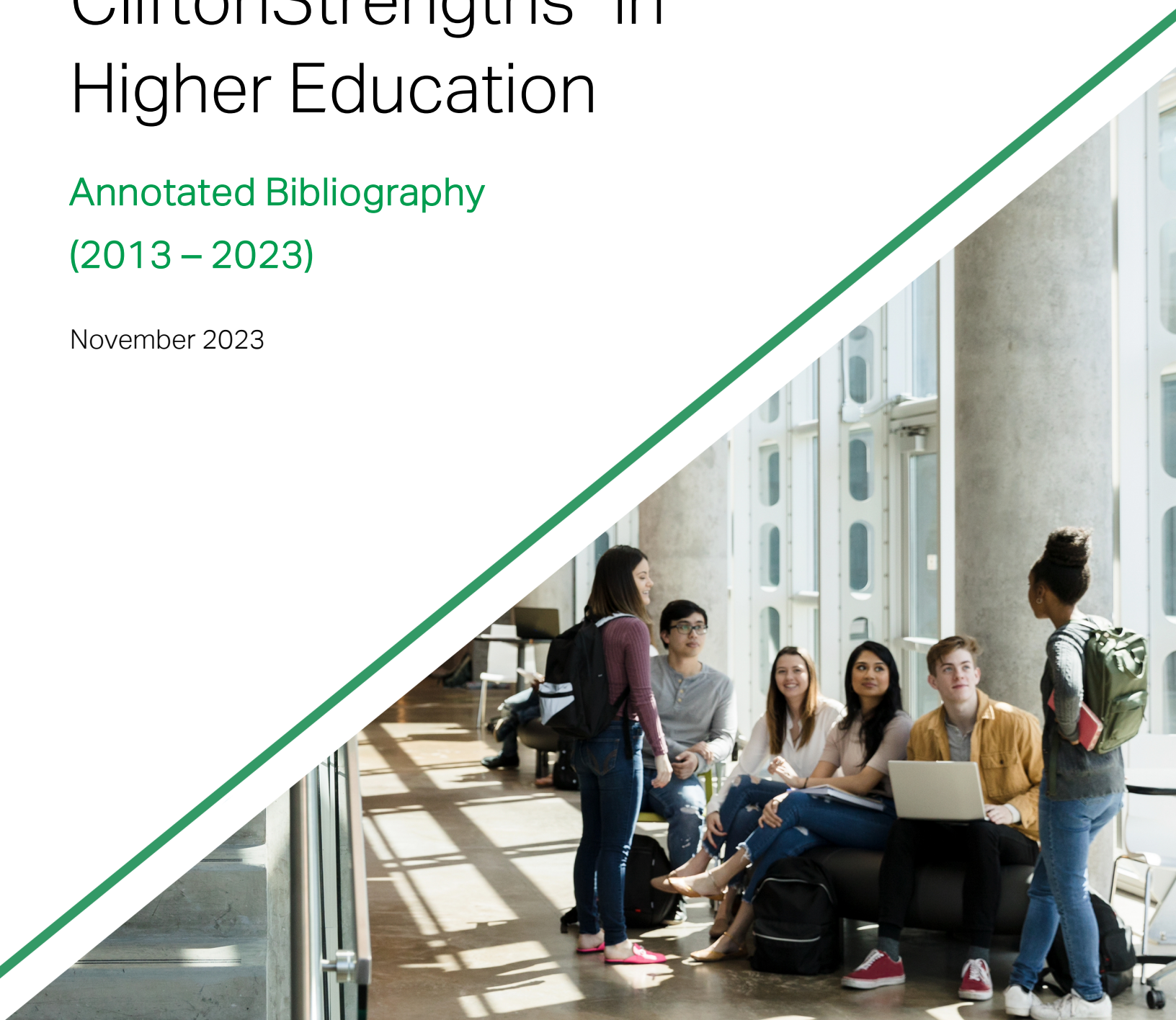
GALLUP®

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# CliftonStrengths® in Higher Education

Annotated Bibliography  
(2013 – 2023)

November 2023



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# Executive Summary

## Included Studies

This report provides an annotated bibliography of all available CliftonStrengths® ( $k = 30$ ) studies, available through web-search, which meet the following criteria:

- published studies, master's theses/dissertations and conference presentations dated between 2013-2023
- participants: current undergraduates, graduate students or recent alumni
- measured an outcome of CliftonStrengths use beyond a mere description of strengths profiles
- empirical studies, which included qualitative or quantitative findings

Studies are reviewed in alphabetical order.

## Results

The literature search resulted in the following findings:

- many high-quality unpublished qualitative dissertations
- outcomes were more commonly perception-based (e.g., confidence) rather than concrete (e.g., GPA, retention)
- interventions took place in classrooms, career centers and campus-wide
  - foci of interventions included personal development, career preparation, leadership development and team building
  - varying level of detail regarding intervention content
- most studies were on undergraduate students from the United States

# A Note About External Research

All research summarized here was conducted by researchers outside of Gallup. Gallup researchers summarized the methodology and results of these studies based on the available information in each publication, but Gallup researchers were not involved in the studies described below. When possible, their full abstracts have been included with no changes.

At the time of these publications, CliftonStrengths may have been named StrengthsFinder®, Clifton StrengthsFinder or StrengthsQuest®; results summaries describe the tool as CliftonStrengths to assist with clarity.

Summaries include specific details about the methodology of each study, and readers are encouraged to assess the findings concurrently with these descriptions. To assist readers with interpreting results, we provide the following categorization system:

- Population-Administered Interventions:
  - strengths-intervention was administered to a population (entire college or university)
  - population was surveyed and yielded over 50 completes
  - surveys were administered both pre- and post-intervention and only post-intervention
- Course-Administered Interventions:
  - strengths-intervention was administered to an entire course or program with no comparison group
  - over 50 respondents participated in the intervention group
  - survey data was collected either in just a post-test or in a retrospective pre-/post-test
- Experimental Research:
  - strengths-intervention was administered to a group, and a control group received either no treatment or a different treatment
    - groups were randomly assigned or assigned based on course enrollment
  - studies leveraged either a pre-/post-test design or a post-test only
  - studies have groups of less than 50 respondents
- Experimental Research With Non-Random Assignment:
  - strengths-intervention was administered to a group, and a control group received either no treatment or a different treatment
    - groups were not randomly assigned
  - studies leveraged a pre-/post-test design
- Qualitative Research:
  - studies collected interview or open-ended response data
  - studies have smaller samples
  - administered through different mechanisms; these studies rely on either a longitudinal or a post-test-only design
- Mixed Methods Research:
  - studies collected both qualitative and quantitative data

# Allan et al. (2021)

## **Strengths and satisfaction in first year undergraduate students: A longitudinal study**

**Study Type:** Population-Administered Intervention

### **Abstract**

Half of college student attrition occurs in the first year of college, so identifying factors that contribute to student satisfaction is an important target for research. Knowledge and use of one's strengths are two such variables associated with academic and life satisfaction, but studies establishing these relations have been largely cross-sectional. Therefore, the goal of this study was to examine longitudinal relations from strengths knowledge to strengths use and from strengths use to academic and life satisfaction. While strengths knowledge consistently predicted strengths use over time and strengths use consistently predicted academic satisfaction over time, strengths use did not predict life satisfaction over time. These results have implications for strengths research broadly and for higher education personnel working with first year college students.

### **Sample**

First-year students ( $n = 194$ ) attending a large, public research university in the Midwestern United States.

### **Research Questions**

What is the relationship between strengths knowledge, strengths use and outcomes such as academic satisfaction and life satisfaction?

### **Methods**

The researchers collected four waves of data throughout one academic year (waves in July, September, December and April). The survey included measures of strengths knowledge, strengths use, academic satisfaction (measured only at waves 2-4) and life satisfaction. They analyzed data using various autoregressive models with FIML estimation.

**Strengths Knowledge** was measured by the Strengths Knowledge Scale (Douglass, Duffy, Autin, & Allan 2015).

**Strengths Use** was measured by the Strengths Use Scale (Govindji & Linley, 2007).

**Life Satisfaction** was measured with the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985).

**Academic Satisfaction** was measured with the Academic Satisfaction Scale (Lent, Singley, Sheu, Schmidt, & Schmidt, 2007).

### **Intervention**

Students were invited to complete the CliftonStrengths assessment before they started college. This research study was administered independently of the program where students were invited to take CliftonStrengths, and it is unknown how many students in this study completed CliftonStrengths. However, students were encouraged to reflect on their CliftonStrengths results when completing the survey for this study. The article did not describe any strengths-based intervention for students.

### **Results**

Strengths knowledge predicted strengths use over time (i.e., strengths knowledge at one point in time was significantly correlated with strengths use at a future time), and strengths use predicted academic satisfaction over time. In this study, strengths use did not significantly predict greater life satisfaction over time.

# Baker, Crabtree, & Anderson (2020)

## Student pharmacist perceptions of learning after strengths-based leadership skills lab and escape room in pharmacy practice skills laboratory

**Study Type:** Course-Administered Intervention

### Abstract

**Background and purpose:** Leadership is a required component of Doctor of Pharmacy programs. There is opportunity for students to receive instructional education on leadership concepts through serious games.

**Educational activity and setting:** First-year pharmacy students ( $n = 146$ ) participated in a required skills-based leadership lab including a team-based escape room activity. **Findings:** Students reported a statistically significant increase in understanding of leadership concepts and application at the end of the global lab activities ( $p < 0.01$ ) and a majority of the students found the escape room activity “very useful” (56%).

**Summary:** Escape rooms present a unique opportunity to engage students in active learning and problem solving. A majority of the students found the escape room activity useful and enjoyed the interactive application of leadership concepts. Potential challenges to implementing escape rooms such as time to develop, physical space requirements, supplies, and volunteers to facilitate the experience should be considered prior to implementation. Serious gaming is an emerging pedagogy, and this data supplements existing literature to support use in pharmacy education.

### Sample

First-year pharmacy students ( $n = 146$ ) in a required laboratory course at Purdue University.

### Research Questions

Do team-based lab activities contribute to leadership and strengths knowledge in pharmacy students?

### Methods

After completing an escape room intervention, a retrospective pre-then-post survey<sup>1</sup> was administered that asked about perceptions of the lab and reflections of the knowledge students had before the activity. A debriefing group discussion was also held. The survey was assessed using descriptive statistics and paired, one-sided t-tests.

The survey included questions about the perceived usefulness of leadership activities.

Leadership learning was measured as changes in agreement level from the retrospective pre-test to the post-test on nine leadership learning objectives. These were: (1) I am able to define leadership, (2) I am able to identify myths about leadership, (3) I am able to identify what followers need from a leader, (4) I am able to identify how to utilize my strengths when working in a team, (5) I am able to identify how to utilize my strengths for the benefit of my patients, (6) I am able to identify where my strengths are categorized within the leadership domains, (7) I am able to describe ways that I can individually contribute to a team, (8) I am able to describe ways to use my strengths to lead a team, (9) I was able to discuss why teams work at their best when every individual is able to use their strengths.

### Intervention

In the mandatory skills lab, students took a CliftonStrengths assessment, watched leadership videos, engaged in guided discussions on individual and team strengths, and completed an escape room. For the escape room

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<sup>1</sup> Instead of a traditional pre-test, this study administered a survey that included a battery of questions about students' current leadership level and another battery that asked students to estimate their leadership prior to the treatment.

(lab) activity, students were encouraged to create teams of six that mixed team members' strengths to complete a five-puzzle, team-based escape room.

## Results

Specific responses to qualitative debrief questions were not included in the paper, but students reported that the escape room provided an opportunity to observe leadership strengths in action and apply the material. The Evaluating Teams Strengths Activity received an average rating of "useful" from the students.

Survey data show that students expressed significantly higher levels of agreement with their ability to accomplish six of the nine learning outcomes on the post-test than on their retrospective pre-test:

- I am able to define leadership.
- I am able to identify myths about leadership.
- I am able to identify what followers need from a leader.
- I am able to describe ways that I can individually contribute to a team.
- I am able to describe ways to use my strengths to lead a team.
- I was able to discuss why teams work at their best when every individual is able to use their strengths.

Students did not report a significantly different ability to accomplish three of the nine learning outcomes:

- I am able to identify how to utilize my strengths when working in a team.
- I am able to identify how to utilize my strengths for the benefit of my patients.
- I am able to identify where my strengths are categorized within the leadership domains.

# Bradley et al. (2021)

## A teamwork workshop to improve pharmacy students' growth mindset and communication skills

**Study Type:** Course-Administered Intervention

### Abstract

**Objective.** To determine the impact of a workshop on the growth mindset and team communication of first year Doctor of Pharmacy (PharmD) students. **Methods.** A multi-week workshop was developed for first year pharmacy students. The workshop included completion of the StrengthsFinder 2.0, a session on identifying individual and team member strengths, a session on situational communication and conflict resolution models, and a work-up of two pharmacy scenarios requiring conflict resolution. The workshop was delivered to two intervention groups (fall 2019 and fall 2018) and compared to a control group (fall 2017). A pre-post survey was administered to measure change in students' growth mindset and team communication using the validated Growth Mindset and Team Communication (GMTC) tool. Data were analyzed using descriptive statistics, independent sample t-tests, and chi-square tests to compare difference and association. Focus groups were conducted in fall 2017 and fall 2018 to assess students' views regarding teamwork. **Results.** Team communication subscale scores increased significantly among students in the intervention group while there was no significant change in these scores among students in the control group. The focus groups reflected that students had overall positive views about team communication and collaboration, which were also supported by discussions of advantages and challenges during teamwork. **Conclusion.** A teamwork workshop affected pharmacy students' communication skills. Future work should focus on longitudinal measurement of students' self-views to determine the long-term impact of teamwork training interventions.

### Sample

First-year pharmacy students in a required department course. Students in the control group enrolled in the course in fall 2017 ( $n = 74$ ), and students in the intervention group enrolled fall 2018 and 2019 ( $n = 106$ ).

### Research Questions

Does a CliftonStrengths workshop in a first-year required course improve the growth mindset and team communication of Doctor of Pharmacy students?

### Methods

A pre-test was administered in week one of the course, and a post-test was administered during week 15. Changes within the cohort from pre- to post-test were analyzed using paired t-tests.

**Student Satisfaction With Teamwork Experiences** was measured with a modified version of a five-item battery from Persky (2012).

**Growth Mindset** and **Team Communication** were measured with self-report questions from the Growth Mindset and Team Communication tool (Cooper, Lee, Jeter, & Bradley, 2020). This tool included a subscale for Growth Mindset and another for Team Communication.

### Intervention

The multi-week intervention was incorporated into a required first-year course for PharmD students. The instructor assigned lab groups to balance group members' strengths across the four domains.

- Orientation: Students completed CliftonStrengths
- Week 3: Lecture on recognizing individual and team members' strengths
- Week 4: Groups completed pharmacy scenarios by identifying characters' primary strengths and workplace needs
- Week 7: Lecture on process-oriented communication models, situational communication and group conflict resolution tools

- Week 8: Lab session identifying conflict process elements, contributing factors, workplace needs, and development of a conflict management note and narrative
- Week 9: Lab session where groups acted out their narrative followed by a debrief session with the faculty facilitator

## Results

The intervention group showed a significant increase in Growth Mindset (+0.7,  $p < .05$ ). Though substantively limited, this significantly differed from the control group, suggesting that the workshop may have contributed to these increases. Additionally, the workshop was associated with substantial and significant increases in Team Communication (+2.4,  $p < .05$ ).

The focus groups revealed that the control group was more focused on the group's shared resources, whereas the intervention group was more focused on "*learning from diverse perspectives*." The intervention group also revealed a higher level of self-awareness and reflectiveness on group processes.

# Busch & Davis (2018)

## Inside out personal branding (IOPB): Using Gallup Clifton StrengthsFinder 2.0 and 360Reach

**Study Type:** Course-Administered Intervention

### Abstract

A personal brand is an individual's reputation and unique image, which can be a crucial differentiator in today's hypercompetitive job market. This article's two main objectives are: to present an evidence-based approach to developing the self-awareness component of a personal brand, and to analyze the impact of the assignment on student learning outcomes. The Gallup Clifton StrengthsFinder 2.0, which provides an *inside* (or internal) assessment, is used in conjunction with 360Reach, which provides an *outside* (or external) assessment, to guide marketing students through an inside-out approach to developing their personal brand (IOPB). Students report that the assignment helps them understand their talents, improve self-awareness, and prepare them for their job search and career planning.

### Sample

Students from a Master of Science (MS) marketing leadership course ( $n = 35$ ) and an undergraduate (UG) freshman business course ( $n = 81$ ). Most analysis was done on the sample as a whole ( $n = 116$ ).

### Research Questions

How does completing both the 360Reach and CliftonStrengths assessments impact self-awareness, job preparedness and personal branding knowledge among marketing and business students?

### Methods

After creating their personal branding statements, students completed a 31-item questionnaire with survey items drawn from the marketing education literature (Smith, 2004; Stanton & Stanton, 2013; Edmiston, 2014). The researchers were particularly interested in increased self-awareness as a learning outcome.

Researchers ran a confirmatory factor analysis of survey items (factors: branding and self, practical benefit, and time expectations) and examined frequencies and percentages of responses. They used *t*-tests to examine differences between MS and UG student survey responses.

### Intervention

Students completed the CliftonStrengths assessment, received their top five strengths, and then sent the 360Reach assessment to individuals who knew the student well. The 360Reach was intended to complement CliftonStrengths by verifying strengths from an external view. Students completed a personal branding statement once assessments were completed, identifying their Value/Benefits, Differentiation and Target Market.

### Results

Factor analysis yielded two distinct factors: Practical Benefit and Branding and Self. Survey items that mapped onto the Practical Benefit factor include agreement that students would recommend CliftonStrengths mapped onto Practical Benefit, along with intentions to modify their resume with what they had learned, agreement that the assignment had been beneficial for their personal and professional lives, and agreement that developing a personal branding statement made them feel more confident applying to internships.

Survey items that mapped onto the Branding and Self factor include agreement that the assignment increased self-awareness, agreement that the student gained new knowledge about themselves, agreement that the assignment increased people's understanding of personal branding and the vocabulary they use to describe themselves, agreement that the assignment helped the student determine what to do to improve their personal brand, and the assignment helped them gain a better understanding of personal strengths.

More students reported that they would recommend the 360Reach assessment to others than would recommend CliftonStrengths. Significantly more master's students reported willingness to recommend CliftonStrengths than undergraduate students. The master's students were also significantly more likely to report that the overall exercise had professional benefits.

# Christensen (2017)

**Growth in leader efficacy based on participation in a college student leadership development program**  
**Study Type:** Experimental Research with Non-Random Assignment

## Abstract

One emerging area of research in the leadership development literature is leader efficacy. Leader efficacy is ultimately one's internal beliefs regarding the likelihood of being successful when engaging in leadership (Hannah et al., 2008). A quasi-experimental design was used to determine the differences in leader efficacy between students who participated in a collegiate leadership development program and students who did not participate. The treatment group was participants of a semester-long leadership development program, LeadState. The control group consisted of students in a Composition II course. Participants were all full-time college students at South Dakota State University ... (Abstract continues and is available in the full document)

## Sample

Students were sampled from full-time sophomore students at South Dakota State University. Treatment group students participated in a leadership program called LeadState ( $n = 62$ ). Students were nominated into the treatment group by faculty or staff who believed they had leadership potential or could benefit from a leadership development program. Five sections of sophomore-level English Composition were randomly selected to serve as a control group ( $n = 96$ ).

## Research Questions

Is participation in LeadState associated with higher levels of leader efficacy and confidence across demographic groups?

## Methods

The control and treatment groups completed a pre- (administered in January) and post-test (administered in April) survey. Data was analyzed with an Analysis of Covariance (ANCOVA)

**Leadership Efficacy** was measured with the 22-item Leadership Efficacy Questionnaire (LEQ) (Hannah & Avolio, 2013), which measures three constructs: leader action self-efficacy, leader means efficacy and leader self-regulation efficacy. Questions were answered on a 0 (*not at all confident*) to 100 (*totally confident*) scale.

## Intervention

Students in the LeadState program were educated on the Social Change Model (SCM) of leadership development and identified their strengths through CliftonStrengths. The students collaborated with peers in the program and faculty to develop goals and leadership insights. Other program components included a retreat, community service experience and a workshop series.

## Results

LeadState participants experienced significantly higher growth in leader action self-efficacy, leader means efficacy and leader self-regulation efficacy over the semester than students in the control group. Even among students involved in 3-4 college clubs, students experienced significantly more leadership growth over the semester in the treatment compared to control students. The CliftonStrengths test *and reflecting on results* was the highest-rated program component "for success in promoting confidence as a leader."

There was no statistically significant improvement in male students' leadership efficacy in the treatment group, but female students reported significantly higher leadership efficacy after participating in the program. Male students' leadership efficacy was significantly higher than female students' on the pre-test.

# Cooper (2019)

## **Career readiness of college students: An action research study of a strengths-oriented approach to developing the professional skills of resident assistants**

**Study Type:** Mixed Methods Research

### **Abstract**

This action research study explored how employment preparation workshops utilizing a strengths perspective and the Clifton StrengthsFinder assessment equip resident assistants with professional skills for employment after graduation. Employers have expressed that recently graduated new employees are not career ready; critical thinking, the ability to work well with others, solve problems, and be a team player are some of the most important skills for a recent graduate to possess. To address these identified gaps, this research study at a for-profit, technology-based, private college examined resident assistants' participation in weekly workshops as well as in an individual strengths-coaching session. The sources of evidence for this project included a survey completed by the resident assistants as well as my field notes. As a result of the study, the resident assistants improved their sense of self, understanding of others, confidence while working with their peers, and job-searching skills.

### **Sample**

**Pilot study:** Resident assistants and alumna ( $n = 3$ ) at Red Desert University, a midsize university in Southern California. All resident advisors took CliftonStrengths in August and participated in two training sessions as part of RA training. Students who sought one-on-one advising on their strengths were invited to participate in the pilot program.

**Main study:** Sampled from resident assistants at Blue Gardens College, a for-profit, technology-based, private college ( $n = 6$ ). All resident assistants took CliftonStrengths, but some were unable to fulfill all intervention components. Some participants were dropped due to survey non-response.

### **Research Questions**

Are strengths-based workshops and coaching effective in helping resident assistants develop professional skills?

### **Methods**

Data from the pilot study was leveraged to build the main intervention. Field notes were taken in both the pilot and the main study. Survey results from the main study were assessed with descriptive statistics.

**Leadership development** was measured through self-report questions that asked participants if they believed they had grown in certain areas of leadership over the semester.

### **Intervention**

**Pilot study:** The researcher conducted interviews and strengths coaching via email after students sought individual advising based on the CliftonStrengths assessment.

**Main study:** All resident assistants took the CliftonStrengths assessment, and the researcher conducted four 20- to 30-minute workshops with resident assistants during an academic semester during regularly scheduled staff meetings. Workshop topics were an introduction to strengths, the 34 strengths, strengths in combination and strength domains, and strengths in the workplace. Following the workshops, the researcher led one-on-one coaching sessions with each resident assistant, focusing on applying strengths to a future job and researcher suggestions. Resident assistants then completed surveys about perceived growth in skill areas and understanding of strengths.

## Results

Qualitative evidence suggests increased strengths awareness and application of strengths knowledge to course project teams. Additionally, respondents shared that they were successfully applying their CliftonStrengths to job applications and interviews.

On the survey, respondents did not self-report growth in specific skill areas, though students responded positively to their individual strengths report.

# Dresen et al. (2019)

## Building resilience through strengths-based learning during graduate study abroad:

### An exploratory study

**Study Type:** Qualitative Research

## Abstract

**Background:** Leadership growth during short-term study abroad programs remain of critical interest to educators. No research exists on how a strengths-based study abroad curriculum influences resilience growth for working adult graduate students. **Purpose:** This exploratory study sought to examine how utilizing a strengths-based curriculum contributes to the development of resilience in graduate students during a study abroad program. **Methodology/Approach:** An online, open-ended survey was distributed to 11 students who participated in a 2018 graduate study abroad program to New Zealand. Responses were analyzed to identify themes by faculty-organized and student-organized activities. **Findings/Conclusions:** A strengths-based curriculum contributed to the perceived growth of resilience during a study abroad program by providing opportunities to manage, adjust, and overcome challenges. All 11 respondents perceived growth in resilience when planning and implementing the student-organized activities, whereas 9 of the 11 students reported resilience growth within the faculty-organized activities. **Implications:** Graduate study abroad programs provide a rich environment in which to experience growth in resilience through peer engagement and reflection. The strengths-based curriculum establishes a common language in which to discuss challenges and reflect on experiences.

## Sample

Graduate students ( $n = 11$ ) at Winona State University (Minnesota) participating in a study abroad trip.

## Research Questions

Does a strengths-based curriculum help develop resilience among graduate students in a study abroad program?

## Methods

Qualitative data was collected through open-ended questions on a survey. Students were asked to describe, within each of the activity categories, challenges they experienced. They were asked to discuss how they used their strengths to manage the challenging situation and whether they perceived resilience growth.

## Intervention

Sixty hours of pre-work and education prior to a 14-day study-abroad experience focused on strengths-based education. Students completed the CliftonStrengths assessment, read about their and others' strengths, and wrote reflection essays. They also planned individual organization visits to make in-country.

The study-abroad trip was led by a faculty member who is a certified strengths coach. During the trip, students attended their individual organizations (from pre-work) and organized social and physical activities. Faculty led and organized group organization visits and nightly debriefing sessions.

## Results

All students indicated some type of perceived resilience development through the program. However, students reported various (and sometimes multiple) interventions that influenced the change:

- 11 students indicated development through the individual organization visits
- 10 respondents indicated development through the student-organized social interactions and physical activities
- nine students indicated development through the faculty-led group organization visits
- seven students indicated development through the faculty-led nightly debriefing sessions

Responses suggest that students successfully used strengths to overcome challenges. Participants reported leveraging Strategic® and Executing® strengths, in particular, for challenges faced during their individual organization visits.

# Gazaway (2018)

## Talent theme dimensions and academic success among undergraduate agriculture and natural resource students

**Study Type:** Population-Administered Intervention

### Abstract

Strengths-based education initiatives have been implemented at higher education institutions world-wide as efforts to enhance student retention and degree completion. The Oklahoma State University (OSU) College of Agricultural Sciences and Natural Resources (CASNR) joined the institutions utilizing strengths identification and development practices during the fall 2008 semester. The purpose of this study was to explore the relationship between implementation of strengths initiatives by CASNR and college student success...Data were analyzed using descriptive statistics, ANOVA, ANCOVA, independent measures *t*-tests, and discriminant analysis procedures. It was concluded that academic and talent profiles of CASNR students who experience the strengths identification and development interventions aligned with profiles of the overall college student population. No significant differences were found in college student success factors between talent theme dimension groups, and no significant difference was found in retention or graduation rates between pre-intervention and post-intervention populations ... (Abstract continues and is available in the full document)

### Sample

This study leveraged three different sample definitions to conduct three distinct analyses.

**Talent Theme Analysis:** All College of Agricultural Sciences and Natural Resources (CASNR) students who completed an introductory agricultural course during a three-year period and who earned their degree within 12 regular semesters of enrollment at the college ( $n = 551$ ). Students who took the course who did not complete a bachelor's degree or did not complete it in 12 or fewer semesters were excluded from the analysis.

**Retention Rate Analysis:** All CASNR students for the seven years prior to the introduction of the intervention (pre-intervention) and all CASNR students since the introduction of the intervention.

**Graduation Rate Analysis:** All CASNR students from three years prior to the introduction of the intervention and all CASNR students from the three years after the intervention.

### Research Questions

Are the strengths profiles of successful CASNR students significantly different from the strengths profiles of unsuccessful CASNR students? Is collegiate success predictive of dominant talent dimensions?

### Methods

Data about students from the university's Office of Institutional Research was merged with students' CliftonStrengths themes. Data were analyzed with descriptive statistics, ANOVA, ANCOVA, independent measures *t*-tests and discriminant analysis procedures.

Researchers compared the retention rates of students during the seven years prior to the introduction of strengths in the introductory course and retention rates after the introduction of strengths.

**Academic Success** was defined as cumulative GPA, number of semesters in academic distress, major changes and time to degree completion.

**Retention and Graduation** rates were defined as first-year retention rates and graduation rates within six years.

### Intervention

Students completed CliftonStrengths as part of their introductory agricultural course in a lesson on strengths and how people self-assess their talents. The introductory course also included a follow-up lesson on why

developing talents is important and how talent development can improve careers, relationships and academic performance.

## Results

There were no significant differences between the strengths profiles of academically successful students and those who were academically unsuccessful.

First-year retention rates improved from 82.63% prior to the intervention to 83.74% after introducing the intervention. Six-year graduation rates improved from 66.93% to 68.43% after introducing the intervention. However, there is not enough statistical power to conclude that the treatment is definitively associated with these increases.

It should be noted that this summary covers only some of the findings presented in this dissertation. Only results that are directly related to CliftonStrengths outcomes are included here.

# Gerding (2020)

## **Durable discipleship: The value of a strengths-based approach to discipleship**

**Study Type:** Qualitative Research

### **Abstract**

Jesus has commanded His Church to go into the entire world, making disciples, but how do so many different people do something so significant on such a massive scale? God has created each person to reflect His Image, and he has given each of us talents and gifts — characteristics that set us apart from everyone else. These unique qualities are what God uses to empower us to accomplish His mission of making disciples. The Clifton StrengthsFinder assessment is a tool designed to provide individuals with a greater understanding of their strengths, those characteristics that make them who they are. How can a tool such as the Clifton StrengthsFinder influence and assist disciples as they engage in the disciple-making process? The current study utilized a qualitative phenomenology, specifically individual interviews, to explore if individuals who understand their personal strengths, as identified by the Clifton StrengthsFinder assessment, experience an impact on how they engage with the discipleship process. Results from this study indicate that, amid variation in individual knowledge and understanding of personal strengths, participants experienced an impact with the discipleship process.

### **Sample**

Undergraduate student leaders ( $n = 5$ ) at Taylor University (Indiana), a small Christian university, who attended two training workshops and volunteered to participate in interviews.

### **Research Questions**

How does strengths-knowledge impact the discipleship process among college students?

### **Methods**

A survey followed each training session. About three months after the second training session, students were invited to participate in interviews discussing their experiences.

Interview questions assessed whether the training sessions helped participants better understand their strengths. The questions also asked about engagement with discipleship prior to leadership and how participants' knowledge about their strengths influenced their engagement in discipleship.

**Discipleship** is defined as the individual journey of a believer following Jesus and as the intentional commitment of two (or more) Christians following Jesus together. Specific Christian college opportunities such as chapel service attendance and residence hall small groups demonstrate student engagement in discipleship.

### **Intervention**

A strengths-based training session was administered to student leaders preparing for an upcoming role ( $n = 50-60$ ). A few months later, a second training session was administered.

### **Results**

Interview data revealed that students who could better recall their top five (3) were more specific and direct about sharing how their strengths impacted their engagement with discipleship. Students also shared that knowledge of their strengths improved their relationships and engagement with others. Additionally, students found that strengths-awareness was important to self-awareness.

Survey results were not provided.

# Henry (2016)

## **The impact of utilizing strengths intervention to improve self-efficacy and academic outcomes in low-income, first generation students**

**Study Type:** Experimental Research

### **Abstract**

The purpose of this quantitative study was to examine whether utilizing a strengths-based intervention would improve academic outcomes and self-efficacy in low-income, first generation students. Of a random and diverse sample of 92 students, 47 took the Donald Clifton StrengthsFinder survey and participated in a six-week strengths intervention program at a comprehensive university in Southern California. All 92 participants received a pre and posttest Self-Efficacy survey. There was a significant difference in academic outcomes for those who participated in a strengths-based intervention. There was no significant difference in self-efficacy change scores for either group. Participation in the strengths-based treatment group was the strongest predictor of improved academic outcomes. Strengths-based interventions may contribute to academic practices by giving students positive information about themselves that they can apply academically and in their personal lives. Therefore, institutions of higher learning can incorporate strengths-based interventions into orientation programs, transitional programs, leadership development, and course pedagogy to assist students with their academic achievement.

### **Sample**

Low-income, first-generation college students who were first-time freshmen ( $n = 92$ ) at a university in Southern California. Students were part of the Educational Opportunity Program (EOP), which grants eligible undergraduates CSU admission and academic assistance, and, sometimes, financial assistance.

### **Research Questions**

Does participation in CliftonStrengths intervention increase self-efficacy and academic achievement for low-income, first-generation college students?

### **Methods**

All participants completed a pre- and post-test measure of self-efficacy and academic achievement. Additionally, both the treatment and control groups completed self-efficacy measures pre- and post-test and received a score in the freshman seminar course at the end of the semester.

Mean imputation was used for a few items for which individual participants had missing item data. Data was analyzed with independent samples  $t$ -tests, one-way ANOVA and hierarchical linear regression.

**Self-Efficacy** was measured with a modified version of the 12-item Sherer General Self-Efficacy Scale (Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, & Rogers, 1982) that was tailored to assessing self-efficacy in an academic domain. Students' change scores were computed as the difference between their self-efficacy on the pre- and post-test.

**Academic Outcomes** were operationalized by the grade students received in their freshman seminar course.

Included potential intervening variables: amount of time student contributed to classroom discussion, amount of time student read material relating to class assignments, how often students combined ideas from different courses into academic involvement, number of meeting times with an instructor outside of class, number of hours student studied per night, and how many days students had used tutoring during the summer.

### **Intervention**

Students were assigned to a class that took the CliftonStrengths assessment and completed a six-week strengths intervention ( $n = 47$ ), or they were assigned to a control group where they did not take the strengths assessment or participate in the strengths intervention transitional program ( $n = 45$ ).

The six-week strengths intervention program occurred during the summer before courses began. The treatment group took the CliftonStrengths assessment and received intervention, which consisted of 1) learning definitions of top five strengths, 2) CliftonStrengths *Reflection Interview*, 3) *Picture of Excellence*, 4) *When You Are at Your Best*, 5) *Strength Discovery*, and 6) summary of the previous five weeks' activities.

## Results

Students in the treatment group had significantly higher academic outcomes, and their participation in the treatment group was associated with a higher course grade. The treatment was more predictive of increased academic outcomes in female students than male students. However, there was no significant difference between the changes in self-efficacy over the six-week course between the treatment and control group, nor was the treatment a significant predictor of increased self-efficacy.

While only 15% of treatment group students reported that they could identify their top five strengths at the end of the treatment, 61% reported using one of their top five strengths during the six-week program. Ninety-two percent of the students agreed or agreed strongly that they would use their strengths to help them academically in the future.

# Hinz & Bryant (2013)

## Using strengths to mentor students

**Study Type:** Population-Administered Intervention

### Abstract

N.A.

### Sample

First-year undergraduate students ( $n = 997$ ) at the University of Minnesota

### Research Questions

Does strengths-related mentorship impact strength awareness, student engagement, and hope?

### Methods

Researchers surveyed freshman students toward the end of their first semester about strengths-related interactions in various contexts and with various individuals. Survey data was analyzed with linear regression. Researchers also conducted focus groups.

**Strengths Awareness** was measured with the 10-item Strengths Awareness Measure (Anderson, 2003).

**Engagement** was measured with the 12-item College Student Engagement Scale, based on the Q<sup>12</sup>® (Harter, Schmidt, Killham, & Agrawal, 2009).

**Hope** was measured with the eight-item Adult Trait Hope Scale (Snyder, Irving, & Anderson, 1991).

**Strengths-Related Mentorship** was not defined as part of the survey. Student responses about the presence (or lack thereof) are based on their unreported student definitions of this term.

The researchers controlled for the presence of other strengths-related interactions (e.g., with friends), gender and race/ethnicity.

### Intervention

Students completed CliftonStrengths as part of new student orientation. According to the publication, the University of Minnesota has incorporated strengths in a variety of student programs. This study is particularly focused on strengths-related mentorship for undergraduate students.

### Results

Based on survey data, strengths-related mentorship was significantly and positively associated with strengths awareness, engagement and hope, controlling for other strengths-related interactions, gender and race/ethnicity.

Focus group findings were not reported.

# Ingamells, Napan, & Gasquoine (2013)

## **Strengths in action: A pilot study of a strengths development programme within tertiary education utilising the Clifton StrengthsQuest & narratives of strengths interviews**

**Study Type:** Qualitative Research

### **Abstract**

This paper focuses on the experience of two sub-sets of students who took part in a pilot study which explored the effectiveness of StrengthsQuest (Clifton and Anderson, 2004), together with StrengthsQuest coaching and narrative of Strengths interviews within the Bachelor of Social Practice and Bachelor of Nursing at Unitec Institute of Technology, New Zealand. The pilot study was primarily focused on whether or not identification and appreciation of strengths could contribute to students' education as social workers and nurses, and aid them in making choices about career direction. We also enquired into whether the programme we devised could be a starting point for the development of a strengths-based approach within social work and nursing education.

Students reported that by becoming aware of their talents their confidence increased and they became more appreciative of what they had to offer in their personal and professional lives. They also reported improvements in study, shaping their career choices and personal breakthroughs. The strength of student feedback indicates that there is value in the integration of a strengths-based approach into social work and nursing education.

### **Sample**

Social work and nursing undergraduate students ( $n = 12$ ) at Unitec Institute of Technology, New Zealand

### **Research Questions**

Can strengths knowledge contribute to student education and assist them in making decisions about career direction?

### **Methods**

Students were administered pre- and post-questionnaires about their relationship with their perceived strengths ( $n = 75$ ). Some students took part in CliftonStrengths ( $n = 24$ ). Of those, some students also engaged in CliftonStrengths coaching and an evaluative interview ( $n = 12$ ). Of those students, some were purposively selected to engage in Narrative of Strengths interviews ( $n = 6$ ).

Qualitative data gathered from students who engaged in coaching and an evaluative interview was analyzed for this publication.

### **Intervention**

The intervention of focus in this study was administered during stage 3. Students "received intensive coaching over a 10-day period, followed up with coaching sessions led by the research team alongside Debbie Marriott, an expert coach trained by Gallup. The coaching exercises were designed by Gallup for use in educational settings for strengths development following the use of" CliftonStrengths. The Narrative of Strengths interviews, based on narrative therapy practice, were designed to engage with personal stories of the strengths identified in CliftonStrengths.

### **Results**

Analysis suggests that many students were surprised by their strengths and that the assessment revealed talents they had previously viewed negatively. Coaching allowed students to reassess these talents and begin honing them toward their development. Additionally, students reported increased confidence and empowerment to challenge themselves more after strengths training. Qualitative data also revealed that

strengths awareness and training allowed students to refine their specific career goals within their field. Overall, 10 of 12 interviewees reported that the experience was very beneficial to them.

Four of five Narrative of Strengths interviewees reported that the exercises yielded additional strengths awareness and commitment to strengths development. Quantitative data was not reported.

# Johnson (2017)

## **Levels of hope and strengths experienced by transfer students in the university transition process**

**Study Type:** Experimental Research with Non-Random Assignment:

### **Abstract**

This study explored levels of hope and understanding of personal strengths experienced by College of Agriculture transfer students during the transition from a previous institution into a four-year, west coast university. There is a sizeable amount of research regarding Hope Theory and the traits of Agency and Pathways, as well as the transfer student population and transition process. However, research is limited about the effect of hope and strengths specific to the transfer student demographic ... (Abstract continues and is available in the full document)

### **Sample**

Sample of College of Agriculture transfer students at a West Coast university in the United States. Only included completes of the pre- and post-test ( $n = 45$ ). Among respondents, students self-selected into the treatment group ( $n = 14$ ) based on availability to attend the presentation.

### **Research Questions**

Does understanding of personal strengths increase levels of hope for transfer students during the transition semester?

### **Methods**

All students in the sample completed a pre-test and post-test survey administered online, which included measures of hope. The study used an independent sample  $t$ -test to examine treatment vs. control differences in hope levels of hope at the end of the semester.

**Hope** was operationalized with the 12-item Likert-type Adult Hope Scale (Snyder et al., 1996). This scale conceptualizes two main aspects of hope: agency and pathways.

### **Intervention**

All incoming transfer students at the West Coast university were provided CliftonStrengths for Students assessment codes. Students in the treatment group attended a strengths-based presentation that was tailored to the top five themes among students in the group to bolster their understanding of the assessment.

### **Results**

Students in the treatment did not report significantly different levels of hope compared to those in the control group.

# Lane & Schutts (2013)

## Structural evidence of the strengths self-efficacy scale among university students

**Study Type:** Population-Administered Intervention

### Abstract

N.A.

### Sample

Undergraduate students ( $n = 139$ ) at a private mid-size urban institution in the Southwestern United States who enrolled in co-curricular classes.

### Research Questions

Does students' level of strengths self-efficacy predict hope, wellbeing and meaning in life?

### Methods

Following the course, students completed a questionnaire that measured the constructs below. Researchers factor analyzed strengths self-efficacy and examined convergent validity with other variables.

**Strengths Self-Efficacy** was operationalized with the 16-item Strength's Self-Efficacy Scale (Zhao, Tsai, Chaichanasakul, Flores, & Lopez, 2010), which sought to measure individuals' belief in their top five strengths.

**Academic Self-Efficacy** was measured with the Academic Self-Efficacy Scale (Chemers, Hu, & Garcia, 2001).

**Hope** was measured with the eight-item Adult Trait Hope Scale (Snyder, Irving, & Anderson, 1991).

**Meaning of Life** was measured with the 10-item Meaning of Life Questionnaire (Stenger, Fraiser, Oishi, & Kaler, 2006), which measured two dimensions: presence of meaning (referring to respondents' sense of meaning and purpose) and search for meaning (referring to respondents' motivation to find meaning in their lives).

**Life Satisfaction** was measured with the five-item Satisfaction with Life Scale (Oishi, 2006).

**Engagement** was measured, but the scale was not described.

### Intervention

Students enrolled in 10-week co-curricular classes in which they took CliftonStrengths and were invited to participate in a survey about their talents. Enrollment in the co-curricular courses was open to all students at the institution.

### Results

The final model of SSES had 14 items (Cronbach's  $\alpha = 0.952$ ) and two factors: strengths building (e.g., "Apply your strengths at work/school") and strengths application (e.g., "Utilize strategies for enhancing your strengths"). These factors explained 70.76% of the variance within items.

Strengths self-efficacy was found to be highly correlated with hope. It was also significantly and positively associated with engagement, life satisfaction, academic self-efficacy and the search dimension of meaning in life.

# Lane & Schutts (2014)

## Predicting the presence of purpose through the self-efficacy beliefs of one's talents

**Study Type:** Course-Administered Intervention

### Abstract

Individuals with greater levels of purpose and meaning tend to be happier, demonstrate greater self-control, strong values, and have healthier mental attitudes (Molasso, 2006a; Steger, 2009). It has been suggested that knowing one's talents may be related to the development of purpose, but this hypothesis has not been previously tested. This study examines the self-efficacy belief in one's talents identified through the Clifton StrengthsFinder and its relationship to hope, well-being, and meaning in life among college students. Results from a path analysis indicate that these self-efficacy beliefs can predict hope and the presence of meaning in life, and the results may suggest that this inventory can be a practical assessment tool.

### Sample

Undergraduate students ( $n = 217$ ) attending a private mid-sized urban institution in the Southwestern United States and a regional public university in the Southeastern United States.

### Research Questions

What is the relationship between students' strengths self-efficacy and outcomes (meaning in life, hope and life satisfaction)?

### Methods

Students volunteered to take CliftonStrengths, participated in a workshop about strengths (Strengths Activity Workbook), and completed a questionnaire on strengths self-efficacy (SSES), meaning in life, hope and life satisfaction after the workshop. Researchers conducted confirmatory factor analysis of the two-factor SSES, made some modifications to improve model fit, then used path analysis to examine the relationship between SSES and outcomes.

**Strengths Self-Efficacy Scale** was measured with a two-dimensional scale (strengths building and strengths application; Zhao, Tsai, Chaichanasakul, Flores, & Lopez, 2010).

**Hope** was measured using the two-dimensional Adult Trait Hope Scale (pathways thinking and agency thinking; Snyder et al., 1991; Rand & Cheavens, 2009).

**Meaning in Life** was measured with a two-dimensional scale (presence of meaning, search for meaning; Steger, Frazier, Oishi, & Kaler, 2006).

**Satisfaction With Life** was measured with a five-item inventory by Pavot & Diener (1993).

### Intervention

Every student participated in a workshop that used Gallup's *Strengths Activity Workbook*.

### Results

Strengths self-efficacy was a significant predictor of hope, accounting for 34% of the variance. Additionally, strengths self-efficacy, hope and satisfaction with life altogether accounted for 21.1% of the variation in the presence of meaning of life.

# Ludwig, Nagel, & Lewis (2017)

## Student learning outcomes from a pilot medical innovations course with nursing, engineering, and biology undergraduate students

**Study Type:** Qualitative Research

### Abstract

**Background:** Preparing today's undergraduate students from science, technology, engineering, and math (STEM) and related health professions to solve wide-sweeping healthcare challenges is critical. Moreover, it is imperative that educators help students develop the capabilities needed to meet those challenges, including problem solving, collaboration, and an ability to work with rapidly evolving technologies. We piloted a multidisciplinary education course aimed at filling this gap, and subsequently assessed whether or not students identified achieving the course objectives. In the course, undergraduate students from engineering, pre-nursing (students not yet admitted to the nursing program), and pre-professional health (e.g., pre-med and pre-physician's assistant) were grouped based on their diversity of background, major, and StrengthsFinder proficiencies in a MakerSpace to create tangible solutions to health-related problems facing the community. We then used qualitative content analysis to assess the research question: what is the impact of undergraduate multidisciplinary education offered in a MakerSpace on student attitudes towards and perceptions of skills required in their own as well as others' occupations?... (Abstract continues and is available in the full document)

### Sample

Undergraduate students ( $n = 22$ ) from engineering, biology/pre-professional health and pre-nursing who enrolled in a three-hour, multidisciplinary elective course at James Madison University (Virginia).

### Research Questions

What is the impact of multidisciplinary education in MakerSpace on student learning and knowledge of skills required for professional work?

### Methods

At the end of the course, researchers conducted interviews with students that included the question: "What did you value about what you learned in the class?" The researchers used qualitative content analysis to identify key themes from the interviews and used an iterative process to increase inter-rater reliability.

### Intervention

Students took part in a multidisciplinary STEM course in MakerSpace.<sup>2</sup> All students took the CliftonStrengths assessment and received the book Strengths Based Leadership before starting the course. Students were selected into teams with a mix of strengths and disciplines and then received instruction on diversity in teams. In the course, they completed exercises in problem-solving, collaboration and assessments in addition to required strengths-based readings. They then participated in exit interviews.

### Results

Interviews revealed that students felt their awareness of their strengths and weaknesses grew while working on a team and that they "learned how to interact with others." Students also reported discussing the skills they learned in this course outside of class. Overall, students demonstrated learned capabilities for working on an interprofessional team.

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<sup>2</sup> A classroom designed with a 3D printer, laser cutter, large format printer, virtual reality software and craft supplies. The furniture in the space allowed for movement and flexibility according to student needs. The room also included digital displays and mobile dry-erase boards.

# Owens, Motl, & Krieschok (2016)

## A comparison of strengths and interests protocols in career assessment and counseling

**Study Type:** Experimental Research

### Abstract

This study examined the relative performance of three career counseling protocols: a strengths-based protocol, an interest-based protocol, and a protocol that combined strengths and interests. Outcome measures included career exploration, occupational engagement, career decision self-efficacy, hope positive and negative affect, and life satisfaction pre- and post-intervention. The participants consisted of 82 undergraduate students enrolled in a career and life-planning course. Each participant received a career counseling intervention and a Strong Interest Inventory (SII), StrengthsFinder, or both the SII and StrengthsFinder interpretation. While all three groups showed significant gains from pretest to posttest on most outcomes, results suggest that interests protocol (IP) was the most effective approach when considering the conservation of resources. However, results also merit further exploration of the combined protocol (CP; strengths plus interests) given the greatest gains were achieved by their approach on all but one construct, though not significantly different from the IP. Implications are discussed.

### Sample

Undergraduate students ( $n = 82$ ) in six sections of a career and life-planning course at a large Midwestern university in the United States.

### Research Questions

Do positive-psychology career counseling protocols affect career exploration outcomes? If so, what protocols are most effective?

### Method

Students completed a pre-test and then administered the treatment assigned to their course section. Two sequential class meetings were devoted to the treatment. Post-testing was administered two weeks after the treatment. ANOVA analysis was used to test the effects of the treatment on the outcomes of interest (career exploration, occupational engagement, career decision self-efficacy, hope, positive and negative affect, and life satisfaction). Paired samples t-tests measured changes within each treatment for the outcome variables over time.

**Career Exploration** was operationalized with the 59-item Career Exploration Survey (Stumpf, Colarelli, & Hartman, 1983) designed to look at the process, reactions and beliefs students have to and about career exploration.

**Occupational Engagement** was operationalized with the 9-item Likert-type Occupational Engagement Scale-Student (Cox, Krieschok, Bjornsen, & Zumbo, 2015).

**Career Decision Self-Efficacy** was measured with the 25-item Likert-type Career Decision Self-Efficacy-Short Form (Betz & Taylor, 2006).

**Hope** was measured with the 8-item Likert-type Hope Scale (Snyder, Harris, Anderson, Holleran, Irving, Sigmon..., & Harney, 1991), designed to measure two subscales of hope: Pathways (ability to generate pathways to achieve some goal) and Agency (motivation to achieve goals).

**Affect** was measured with the 20-item Likert-type Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988) designed to measure both positive and negative emotions over a period of time.

**Life Satisfaction** was measured with the 5-item Likert-type Satisfaction with Life Scale (Deiner, Emmons, Larsen, & Griffin, 1985).

## Intervention

Course sections were randomly assigned one of the three career counseling protocols: Interest Protocol, Strengths Protocol or Combined Protocol. Sections were also randomly assigned one of four trained university employees as instructors. Students in the same section of the course were all administered the same treatment. Each group had one session on interpreting their instrument and another session for career counseling related to their instrument. During these sessions, narrative writing, worksheets, visualization and goal setting were tailored to the treatment condition. In the next two weeks of the course, all students engaged in the same additional career class activities.

The Interest Protocol (IP) ( $n = 26$ ) used the Strong Interest Inventory with interpretation following the Prince (2007) method of receiving the assessment. This meant clarifying the goals of interpretation, providing an overview and then discussing the various aspects of the assessment. The 193-item **Strong Interest Inventory** had five sections and included scores “on six general occupation themes, 30 Basic Interests Scales, 122 Occupation Scales, 5 Personal Styles Scales, and administrative indexes).

The Strengths Protocol (SP) ( $n = 25$ ) used the CliftonStrengths assessment with interpretation focused on discovering strengths and developing strengths for leadership.

In the Combined Protocol (CP) ( $n = 31$ ), the assessments and interpretations were incorporated into the lesson.

## Results

All protocols were associated with a significant increase in career decision self-efficacy, increased frequency of career exploration, increased intention to explore, increased focus, increased satisfaction, increased employee outlook, and increased certainty of career exploration outcomes.

The Combined Protocol was significantly more effective at increasing focus, satisfaction with information, employee outlook and life satisfaction than the Strengths Protocol. The Combined Protocol did not have sufficient statistical power to be significantly more effective than the Interest Protocol, but for the outcomes of interest, it produced more positive change from pre- to post-test.

# Rosch & Imoukhuede (2016)

**Improving bioengineering student leadership identity via training and practice within the core-course**  
**Study Type:** Course-Administered Intervention

## Abstract

The development of a leadership identity has become significant in bioengineering education as a result of an increasing emphasis on teamwork within the profession and corresponding shifts in accreditation criteria. Unsurprisingly, placing bioengineering students in teams to complete classroom-based projects has become a dominant pedagogical tool. However, recent research indicates that engineering students may not develop a leadership identity, much less increased leadership capacity, as a result of such efforts. Within this study, we assessed two similar sections of an introductory course in bioengineering; each placed students in teams, while one also included leadership training and leadership practice. Results suggest that students in the leadership intervention section developed a strong self-image of themselves as leaders compared to students in the control section. These data suggest that creating mechanisms for bioengineering students to be trained in leadership and to practice leadership behaviors within a classroom team may be keys for unlocking leadership development.

## Sample

Bioengineering students ( $n = 39$ ) at the University of Illinois at Urbana Champaign enrolled in an introductory required bioengineering course. One section was assigned to the treatment ( $n = 25$ ), and one was assigned to the control ( $n = 14$ ). The total course enrollment across the classes was 63, but students had the opportunity to opt-out.

## Research Questions

Does strengths-based leadership intervention increase leader identity, motivation to lead and team-oriented behaviors in bioengineering students?

## Methods

Students completed an online survey at the end of the semester. The researchers used a retrospective survey design<sup>3</sup> that asked students to reflect on their answers prior to the semester and at the end of the semester. Analysis consisted of between- and within-subjects *t*-tests to compare team and leadership outcomes within the treatment group and between the treatment and control groups.

**Leadership Identity** was measured with the five-item Leader Identity Scale (Hiller, 2005), which focused on assessing the extent to which students self-identify as a leader.

**Affective-Identity Motivation to Lead** was measured with the 10-item Motivation to Lead Scale (Chan & Drasgow, 2001) and focused on assessing students' emotional need to be seen as a leader by others.

## Intervention

Students enrolled in two sections of an introductory required course for bioengineering students. Students in both courses were assigned to semester-long student teams using the Comprehensive Assessment of Team Member Effectiveness (CATME) Team Maker. While the treatment course received instruction on effective leadership and had opportunities to practice leadership behaviors, the control course had similar assignments without time spent learning effective leadership strategies.

After four weeks in the course, treatment students participated in CliftonStrengths, which included their strengths insight and action planning reports. Two weeks later, treatment students had a workshop from a trained strengths coach. In the intervention section, students served as group leaders and secretaries on a

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<sup>3</sup> For a description of retrospective survey design, please see Baker, Crabtree, & Anderson (2020).

rotating basis for in-class group assignments. Additionally, students in the treatment completed CATME team assessments at the beginning of the semester.

## Results

The treatment and control group showed significant within-subjects increases in team-oriented behaviors (team contributions, task commitment and team interdependence) from week four to week nine (the duration of the intervention). Within the treatment group, students reported significant growth in leadership identity and affective-identity motivation to lead, but the control group reported no significant growth in these areas. The treatment and control groups were not significantly different in their reported levels of leadership identity and affective-identity motivation to lead at the start of the semester (measured at the end of the semester), suggesting that the treatment group improved these skills more meaningfully than the control group.

# Ryan (2020)

## Characterization of student strengths, leadership domains and student perceptions on success

**Study Type:** Mixed Methods Research

### Abstract

This research explored the strengths of students in the Agricultural and Biosystems Engineering (ABE) Department at Iowa State University identified by the Clifton StrengthsFinder and the relationship between those strengths and student success. In the department, students are taught about strengths early in their program to help them better understand how to utilize their unique aptitudes to be successful, but limited analysis has been done on these data. The purpose of this research was to analyze the student strengths data to characterize patterns of strengths among students, identify patterns of leadership domains, and explore connections of how students use their strengths. Three years of student strengths data were collected and analyzed to identify differences between gender and type of major (technology or engineering) in the department... (Abstract continues and is available in the full document)

### Sample

*Patterns of Strengths and Domains:* Census of all students in a required Agricultural and Biosystems Engineering department course from Spring 2016 – Fall 2018 ( $n = 826$ ) at Iowa State University.

*Application of Strengths:* Sample of students ( $n = 68$ ) in the Agricultural and Biosystems Engineering (ABE) department at Iowa State University. Respondents were only retained if they had already taken CliftonStrengths. Semi-structured interview participants ( $n = 8$ ) were selected with quota sampling.

### Research Questions

*Patterns of Strengths and Domains:* What relationship, if any, is there between respondents' gender, major and their CliftonStrengths and leadership domains?

*Application of Strengths:* How do students use their strengths, and is there a relationship between the use of strengths and academic success?

### Methods

*Patterns of Strengths and Domains:* Academic record data was used to analyze the strengths profiles and demographics of all students over a three-year period. This study leveraged descriptive statistics to assess the most common strengths among demographic groups.

*Application of Strengths:* A mixed-method study that leverages a survey and semi-structured interviews to assess strengths use among students.

The survey asked students where they used their strengths in academics (projects, homework, tests/exams, group activities, labs, etc.). Interview data was used to encourage students to describe how they apply their strengths in these settings. Respondents were asked open-ended questions about times they faced easy or challenging academic circumstances to see if they would describe the circumstances with their strengths.

**Academic Success** was operationalized on the survey as a helpfulness rating of strengths related to their academic success and personal and career pathways. One-way ANOVA was used to see if respondents perceived strengths as being more useful in each of these areas. In the interviews, respondents were asked if strengths were useful in their courses, and follow-up questions were used to determine how each respondent defined success.

One-way ANOVA models were used to determine if self-reported understanding and use of Strengths was associated with different overall and core GPAs. This analysis also used student ranking.

## Intervention

All students in the department are required to take a course in which they complete CliftonStrengths.

## Results

*Pattern of Strengths and Domains:* Restorative® was the most frequently occurring strength across all demographic groups within the department. Achiever® is a top strength for all groups (split by major type and gender) in the department except for female technology students. Male students have Analytical® and Harmony® among their most frequent strengths, while female students have Learner® and Responsibility®.

Executing® is the most prevalent leadership domain among students in the department while Influencing is the least common. However, among female technology students, Influencing® is the most common leadership domain.

*Application of Strengths:* Students report using their strengths more in group or team situations, specifically, they report using their strengths to describe how they lead or fit into the group. There was no significant difference in reported usefulness between academic, career and personal life settings.

Interviews revealed that only three of the eight respondents cited their strengths as being useful academically. Two of these respondents suggested that strengths had academic applications only in group settings. The students described applying strengths to projects, organizational leadership, participation and managing competing demands.

Self-reported use and understanding of strengths were not associated with GPA or student ranking. Interview respondents suggested that it is important to know what you are good at but that this does not necessarily require the language of strengths.

# Seto (2020)

## **What's wrong with looking at what's right? A hermeneutic phenomenological inquiry into Asian American college students' perception of strengths development philosophy**

**Study Type:** Qualitative Research

### **Abstract**

This hermeneutic phenomenological inquiry explored the shared experiences of 26 Asian American college students who attended a university in the Western region of the United States that introduces a strengths development philosophy into the college experience. The study interviewed participants to focus on the meanings made from this experience. The meanings that were derived from participants' experiences with strengths development philosophy were analyzed through the lens of Asian Critical Perspective (AsianCrit) to develop a greater understanding of Asian American undergraduate experiences. Results suggested the majority of participants derived the greatest meaning from strength development philosophy in their college experience when their identified strengths were compatible with Confucian collectivistic principles such as connectedness, discipline, harmony, or responsibility... (Abstract continues and is available in the full document).

### **Sample**

Asian American undergraduate students ( $n = 26$ ) from Confucian heritage cultures (Chinese, Taiwanese, Japanese, Korean or Vietnamese) were purposively sampled from a large, moderately selective public university in the Western United States.

### **Research Questions**

How do Asian American college students contextualize strengths development experiences during college?

### **Methods**

Participants were interviewed during the second semester of the academic year. Two interviews were conducted with each respondent two months apart. A phenomenological approach was applied to the interviewing process, which centered on respondents' lived experiences as a lens to understand their current time frame.

### **Intervention**

The university promotes a strengths culture on campus and had previously provided strengths development opportunities. The strengths development programming had been actively implemented on campus for over five years. Therefore, all students had the opportunity to take CliftonStrengths and engage in strengths development.

### **Results**

Students reported that the strengths development culture of their university was meaningful to them in the context of their culture, but they recognized a tension between "traditional Asian collectivist and Western individualistic influences" during their campus experiences. Interviews revealed that strengths-awareness sometimes suggested career paths that were not aligned with familial expectations, which challenged students to communicate their strengths-based decisions to others.

Half of the respondents reported that traditional Confucian principles were consistent with strengths development themes, while the other half said that the strengths development themes were not relevant for Asian American students.

During their time on campus, students reported reframing their definition of success to include "happiness, passion, inspiration, personal growth, and finding a career and not just a major." Students reported that these changes occurred through active learning, hands-on experience, instances of failure and community.

Most students said the university did not emphasize strengths development outside of offering the assessment during orientation, although some students were offered additional strengths experiences (e.g., group discussion). Students who found CliftonStrengths meaningful said it gave them personal validation, self-confidence and the ability to connect more deeply with others.

Some students reported that leveraging their strengths was a way to resist stereotypes about Asian Americans in academic and internship settings.

# Soria et al. (2017)

## **Strengths-based advising approaches: Benefits for first-year undergraduates**

**Study Type:** Population-Administered Intervention

### **Abstract**

We explored the benefits of strengths-based academic advising approaches for first-year students (N = 1,228). We used propensity score matching techniques to create matched pairs of students who did and did not engage in strengths-based advising conversations with an advisor. First-year students who experienced strengths-based conversations had significantly higher rates of first-year retention and graduation in 4 years, levels of engagement, and academic self-efficacy than students who did not participate in these conversations. Focus groups of 21 advisors provided insights into strengths-based advising in 3 findings: strengths approaches facilitated advising relationships (thereby supporting students' engagement, retention, and graduation), enhanced students' self-awareness and confidence, and advanced advisors' own personal and professional development (thereby positively influencing student success).

### **Sample**

First year undergraduate students ( $n = 1,228$ ) at the University of Minnesota.

### **Research Questions**

Does having at least one strengths-based advising discussion impact academic self-efficacy, engagement, retention to second year and graduation within four years?

### **Methods**

First year students completed CliftonStrengths prior to orientation. Students then completed a survey at the end of their first semester. The survey measured several control variables, including demographics, college experiences (field of study, GPA) and strengths enthusiasm (perception that strengths provide value; whether advisor discussions were self-initiated).

Researchers used propensity score matching to compare the first-year retention, time to complete degree, engagement and academic self-efficacy in students who had strengths-based advising conversations ( $n = 893$ ) versus those who did not ( $n = 335$ ). They also conducted focus groups with advisors ( $n = 21$ ) to understand the role of strengths in advising.

**Engagement** was measured with the College Student Engagement Scale (Harter, Schmidt, Killham, & Agrawal, 2009)

**Academic Self-Efficacy** was measured using an eight-item scale (Chemers, Hu, and Garcia, 2001).

**Retention and Four-Year Graduation Rates** were measured using administrative data about students' retention from their first to second year.

### **Intervention**

Strengths-related conversation with an adviser during the academic year (self-reported).

### **Results**

Having at least one strengths-based advising discussion predicted significantly higher engagement and academic self-efficacy. Students who reported having a strengths-based advising discussion were 1.53 times more likely to return for their second year of school and 1.90 times more likely to graduate within four years than matched students who did not report such a conversation.

# Soria, Roberts, & Reinhard (2015)

## First-year college students' strengths awareness and perceived leadership development

**Study Type:** Population-Administered Intervention

### Abstract

The purpose of this study was to examine whether first-year college students' strengths awareness is associated with their perceived leadership development. The institution in this study offered all first-year students the Clifton StrengthsFinder assessment and strengths-related programming. The results of hierarchical regression analysis of two concurrent surveys ( $n = 779$ ) suggested strengths awareness explained a significant amount of variance in students' perceived leadership development above and beyond the variance explained by other variables.

### Sample

Opt-in sample of first-year students ( $n = 779$ ) at a large Midwestern university.

### Research Questions

Is strengths awareness associated with perceived leadership development among first-year college students?

### Methods

Prior to the semester, first-year students were incentivized to fill out an online survey that focused on their strengths awareness and engagement with strengths initiatives. At the end of their first year, students were surveyed about perceived leadership development. First-year students who participated in both surveys were included in this study. The researchers used hierarchical regression to examine the variance explained by strengths awareness in perceived leadership development.

**Leadership Growth** was operationalized with changes between self-reported ratings of leadership ability, self-awareness, and understanding of the importance of personal social responsibility from the pre-test to the post-test.

**Strengths Awareness** was measured with the 10-item Strengths Awareness Measure (Anderson, 2003).

Control variables included gender, race/ethnicity, residency (in-state/out-of-state), Pell Grant recipient, first-generation, on-campus residency, enrollment in first-year seminars, cumulative GPA and academic major category (STEM/Health Field, Education/Agriculture, Business, and Liberal Arts).

### Intervention

5,122 first-year students (95.4%) took CliftonStrengths prior to orientation. During their first semester, first-year students engaged in activities related to their top five. Activities occurred during first-year orientation and throughout the semester administered by the university at large, colleges and specific departments. Strengths were incorporated into first-year classes, programming with Housing and Residence Life, and in strengths study groups. Foundations for these interventions come from Lopez and Louis (2009).

### Results

Hierarchical regression reveals that first-years' strengths awareness is significantly associated with perceived leadership development during their first year, even accounting for other potential variables.

# Soria & Stubblefield (2014)

## **First-year college students' strengths awareness: Building a foundation for student engagement and academic excellence**

**Study Type:** Population-Administered Intervention

### **Abstract**

As strengths-based approaches continue to gain steady momentum in colleges and universities, a distinct need for scholarship on the benefits of strengths-based practices has emerged. In fall 2011, all first-year students at a university in the Midwest were invited to discover their strengths by taking the Clifton StrengthsFinder. The purpose of this study was to examine the associations between first-year students' strengths awareness and two outcomes that influence students' success in higher education: academic self-efficacy and engagement when controlled by demographic variables, academic achievement, and strengths interactions.

### **Sample**

First-year students ( $n = 1,397$ ) at a large Midwestern university in the United States.

### **Research Questions**

What is the relationship between strengths awareness and drivers of student success (i.e., academic self-efficacy and engagement)?

### **Methods**

At the end of the first semester, first-year students were invited to take a survey. The survey asked students to self-report the types of strengths-related interactions they had during their first semester. They were also asked to report whether they believed their strengths and interacting with them positively impacted them in academic achievement, self-awareness, feeling like they belong, and overall undergraduate satisfaction.

**Strengths Awareness** was measured with the 10-item Strengths Awareness Measure (Anderson, 2004).

**College Experiences** were measured with information about students' majors.

**Academic Achievement** was measured with ACT and SAT composite scores and cumulative fall GPAs.

**Academic Self-Efficacy** was measured using an 8-item scale (Chemers, Hu, and Garcia, 2001).

**Engagement** was measured with the 12-item College Student Engagement Scale, based on the Q12 (Harter, Schmidt, Killham, & Agrawal, 2009).

Control variables included gender, race/ethnicity, residency (in-state/out-of-state), Pell Grant recipient and first-generation status.

### **Intervention**

5,122 first-year students (95.4%) took CliftonStrengths prior to orientation. During their first semester, first-year students engaged in activities related to their top five. Activities occurred during first-year orientation and throughout the semester administered by the university at large, colleges and specific departments. Strengths were incorporated into first-year classes, programming with Housing and Residence Life, and in strengths study groups.

### **Results**

First-year students' strengths awareness was significantly and positively associated with academic self-efficacy, even when controlling for other variables. In a separate model, strengths awareness was positively associated with students' engagement, even when controlling for other variables. The authors suggest that the

overall variance explained by the models was low (21.6% and 20.2%, respectively), suggesting that “strengths awareness was a positive, but limited, predictor of their academic self-efficacy and engagement.”

# Soria & Stubblefield (2015a)

## Building a strengths-based campus to support student retention

**Study Type:** Population-Administered Intervention

### Abstract

N.A.

### Sample

First year students ( $n = 5,122$ ) at a large Midwestern university.

### Research Questions

1. Do students who take CliftonStrengths have higher retention rates than those who do not take CliftonStrengths?
2. Are strengths awareness and strengths-based discussions associated with retention in the second year?

### Methods

Students took CliftonStrengths before first-year orientation ( $n = 5,122$ ) and participated in varied strengths-based programming during their first semester. They then took a follow-up survey ( $n = 1,493$ ) at the end of their first semester, which measured strengths awareness and whether they had had strengths conversations. Strengths conversations were categorized in the following way: 1) with academic advisors or career counselors, 2) in classes or with professors, and 3) in study groups, student organizations or with friends.

**Strengths Awareness and Strengths Experiences** were measured with the Strengths Awareness Measure by Anderson (2003).

**Strengths Conversations** were reported by students and categorized into three groups: 1) advisors and career counselors, 2) in classes with professors, and 3) in study groups, student organizations or with friends.

**College Experiences** were captured via administrative data from the university (voluntary enrollment in first-year seminars, on-campus residence and participation in retention-focused programs).

**Academic Achievement and Retention** were captured via GPA, retention to the second year of school and ACT scores (or SAT scores converted to ACT scores) from the university.

### Intervention

Strengths-based programming delivered centrally and through individual departments.

### Results

There was an 11% difference in the retention rate among first-year students who took CliftonStrengths (91.5% retention to second year) and students who did not take CliftonStrengths (80.8%). Strengths awareness was related to increased odds of retention in the second year. Holding everything else equal, a standard deviation increase in strengths awareness increases retention odds by 36.4%. Odds of retention also increased for students who had strengths-related discussions with advisors or career counselors, in class or with professors, or in study groups, student organizations or with friends.

# Soria & Stubblefield (2015b)

## **Knowing me, knowing you: Building strengths awareness, belonging, and persistence in higher education**

**Study Type:** Population-Administered Intervention

### **Abstract**

The goal of this study was to examine the benefits of a campus-wide initiative to build first-year students' strengths awareness. The results of a survey of the first-year class ( $n = 1,421$ ) suggest a positive and significant relationship between students' strengths awareness and their belief that the strengths initiatives on campus positively influenced their sense of belonging. The results also suggest a positive and significant relationship between students' strengths awareness and retention to their second year of study. Qualitative analyses of survey data suggest strengths initiatives enhanced students' self-awareness and confidence, facilitated introductory conversations with peers through the development of a common language, and fostered friendships and a deeper understanding of others — factors that are hypothesized to have contributed to students' sense of belonging and retention.

### **Sample**

First-year students ( $n = 1,421$ ) at a large Midwestern university.

### **Research Questions**

Is strengths awareness associated with first-year students' sense of belonging on campus, *and* is strengths awareness associated with first-year student retention?

### **Methods**

At the end of their first semester, all first-year students were recruited for an online survey about their "strengths-related interactions and engagement across campus." The survey included both closed and open-ended questions.

**Sense of Belonging** was measured by asking students to rate their agreement about the impact of strengths in feeling like they belong on campus, getting involved on campus and satisfaction with their undergraduate experience.

**Strengths Awareness** was operationalized as a 10-item Likert-type Strengths Awareness Measure (Anderson, 2004).

**Strengths Interactions** were measured as a binary indicator of whether students reported having strengths interactions.

**Academic Achievement** was measured as ACT composite score and fall GPA.

**Retention** was defined as retention from the first year to the second year.

Control variables included gender, race/ethnicity, residency (in-state/out-of-state), Pell Grant recipient, first-generation, on-campus residency, enrollment in first-year seminars, cumulative GPA, and academic major category (STEM/Health Field, Education/Agriculture, Business, and Liberal Arts).

### **Intervention**

5,122 first-year students (95.4%) took CliftonStrengths prior to orientation. During their first semester, first-year students engaged in activities related to their top five. Activities occurred during first-year orientation and throughout the semester administered by the university at large, colleges and specific departments.

## Results

Increased strengths awareness is significantly associated with an increased sense of belonging on campus. Students who discussed their strengths were significantly more likely to experience a greater sense of belonging than students who did not discuss their strengths. Strengths awareness was also significantly associated with increased retention for the second year.

Open-ended questions reveal that students reported that strengths enhanced their self-awareness and confidence, facilitated introductory conversations, fostered friendships and contributed to their sense of belonging. Strengths created a common language that helped students develop friendships early by enabling meaningful communication about themselves and learning about others.

It should be noted that students who responded to the survey had a higher retention rate than non-respondents.

# Soria & Taylor (2016)

## **Strengths-based approaches in college and university student housing: Implications for first-year students' retention and engagement**

**Study Type:** Population-Administered Intervention

### **Abstract**

Strengths-based approaches are expanding in higher education; however, little is known about the impacts of these approaches in housing and residence life settings. The purpose of this study was to examine the associations between first-year students' strengths interactions in housing and their engagement and retention. The results suggest that first-year students who had strengths-based discussions with community advisors and also participated in strengths-based programming in housing had significantly higher engagement and retention than did their peers.

### **Sample**

First-year students ( $n = 955$ ) at the University of Minnesota who lived in on-campus residence halls.

### **Research Questions**

Do "strengths experiences" increase residential student engagement and retention in their second year?

### **Methods**

First-year students were recruited for an online survey at the end of their first semester. Using hierarchical linear regression, researchers examined the relationship between strengths awareness, engagement and retention.

**Engagement** was measured with the 12-item College Student Engagement Scale, based on the Q<sup>12</sup> (Harter, Schmidt, Killham, & Agrawal, 2009).

**Strengths Interactions** were measured with self-report questions asking if students had engaged in strengths interactions "in general programming or activities with HRL or a community advisor." Self-reported strengths interactions outside of housing were controlled for.

Control variables included sex, race/ethnicity, participation in the university honors program, participation in an advising program for students of underrepresented backgrounds, enrollment in first-year seminars, first-semester GPA and college of enrollment. Enthusiasm for strengths was also controlled for with a Likert-type question asking students to self-report whether they believed strengths had value for them now.

### **Intervention**

Across campus, 5,309 first-year students (96.3%) took CliftonStrengths prior to orientation. During their first semester, first-year students engaged in activities related to their top five. Activities occurred during first-year orientation and throughout the semester administered by the university at large, colleges and specific departments. Strengths were incorporated into first-year classes, programming with Housing and Residence Life, and in strengths study groups. Foundations for these interventions come from Lopez and Louis (2009).

Within Housing and Residence Life, Community Advisors<sup>4</sup> (CAs) took CliftonStrengths and learned how to engage in strengths-based conversations. At the start of the semester, CAs encouraged students to introduce and share their strengths. Throughout the year, CAs were required to hold structured one-on-one conversations with all residents that included discussions about their strengths, and CAs were encouraged to incorporate strengths into required roommate conversations.

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<sup>4</sup> Community Advisors serve in a capacity that on other campuses may be referred to as Resident Advisor or RA.

Professional Staff were trained as strengths educators, and they incorporated strengths into daily work. CAs engaged in ongoing strengths training and conversations with Resident Directors throughout the semester. Strengths Awareness was incorporated into the CA and Resident Director performance review.

## Results

After controlling for other variables, strengths interactions (in Housing) were significantly associated with engagement and retention. Having strengths-based discussions with CAs was positively and significantly associated with higher engagement and retention. Further, students who had strengths-based discussions with their CAs and participated in strengths-related programming in housing had significantly higher engagement and retention than their peers.

# Soria et al. (2019)

## **Strengths-based approaches in co-curricular and curricular leadership: Opportunities to magnify students' thriving**

**Study Type:** Population-Administered Intervention

### **Abstract**

The purpose of this article was to examine the effects of strengths-based approaches in co-curricular and curricular leadership on first-year students' holistic thriving, academic thriving, social thriving, and psychological thriving. We used propensity score matching and regression analyses with survey data from the Thriving Quotient, which was administered to first-year students at large, public research university ( $n = 548$ ). The results suggest students' enrollment in a strengths-based leadership minor course was associated with higher levels of thriving in social, academic, and psychological domains. Students' participation in strengths-based student organizations was associated with higher thriving in social domains, while concurrent enrollment in the strengths-based leadership class and participation in strengths-based student organizations was associated with significantly higher holistic thriving, social thriving, and psychological thriving.

### **Sample**

First-year students ( $n = 548$ ) at the University of Minnesota. Of all the survey respondents, 274 students reported having strengths-based conversations in this student organization. These students, as well as a matched set of 274 students<sup>5</sup> who did not have strengths-based conversations in student organizations, were retained for the sample.

### **Research Questions**

How does student participation in curricular and co-curricular strengths-based leadership discussion affect holistic, academic, social and psychological thriving?

### **Methods**

At the end of their first semester, a survey was administered to all first-year students at the University. Researchers used OLS regression to study the relationship between students' participation in curricular and co-curricular strengths-based conversations and their sense of thriving.

**Holistic Thriving** was measured with the survey question: "Thriving is defined as getting the most out of your college experience so that you are intellectually, socially and psychologically engaged and enjoying the college experience. Given that definition, to what extent do you think you are thriving as a college student this semester?"

**Academic Thriving** was operationalized through a four-item construct measuring engaged learning (Schreiner, McIntosh, Kalinkewicz, & Propst Cuevas, 2013) and a five-item construct on academic determination (Schreiner et al., 2013).

**Social Thriving** was measured with social connectedness with a six-item construct (Schreiner et al., 2013) and a battery on diverse citizenship (Schreiner, 2010).

**Psychological Thriving** was measured as students' two-item positive perspective on life (Schreiner et al., 2013).

### **Intervention**

Across campus, over 95% of first-year students took CliftonStrengths prior to orientation. During their first semester, first-year students engaged in activities related to their top five. Activities occurred during first-year

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<sup>5</sup> Researchers used propensity score matching to ensure that each student in the treatment condition was matched with a student (not in the treatment condition) who has the most similar estimated propensity score.

orientation and throughout the semester administered by the university at large, colleges and specific departments. Strengths were incorporated into first-year classes, programming with Housing and Residence Life, and in strengths study groups.

Students enrolled in an introductory leadership minor course received specific instruction about strengths, their talent themes, and how to integrate strengths into leadership. Students in the course also completed a group project and were encouraged to construct teams with diverse strengths.

Leaders in student organizations were trained in strengths and were encouraged to incorporate strengths training into their organization. Methods included inviting a strengths coach to provide a workshop and feedback sessions on how member strengths could contribute to the organization.

## Results

Strengths-based conversations in the leadership minor course were positively associated with students' sense of holistic thriving, engaged learning, social connectedness, diverse citizenship and positive perspective. Enrollment in the strengths-based leadership course was associated with higher levels of thriving in all areas.

Strengths-based conversations in student organizations were positively associated with students' sense of holistic thriving, social connectedness, diverse citizenship and positive perspective. Participation in strengths-based conversations in student organizations was not associated with academic thriving.

Participation in strengths-based leadership conversations in the course and in other student organizations was positively associated with academic determination, social connectedness, diverse citizenship and positive perspective.

# Tomkovick & Swanson (2014)

## Using StrengthsFinder to identify relationships between marketing graduate strengths and career outcomes

**Study Type:** Population-Administered Intervention

### Abstract

The present study seeks to better understand how marketing graduates' strengths, and utilization of those strengths in the workplace, may be associated with a variety of academic and career outcomes. Respondents completed two different questionnaires. Findings suggest that marketing graduates whose strengths are not being utilized with their work situation report more negative attitudes and intentions than those whose strengths are being used on the job. Marketing educators are encouraged to assist students to identify and self-market their unique strengths to secure the benefits that result from appropriate job fit.

### Sample

Marketing alumni ( $n = 178$ ) currently in the workforce, who had graduated between 1992 and 2012 from a medium-sized public university in the U.S.

### Research Questions

How are marketing graduates' strengths domains and strengths utilization at work associated with academic and career outcomes?

### Methods

After taking CliftonStrengths, a second survey instrument was administered to measure the outcome variables of interest. Results were analyzed with factor analysis, multivariate analysis and univariate tests.

**Strengths Use at Work** was measured with an index of five Likert-style questions where respondents were asked how often they use each of their top five strengths at work. This variable was examined both trichotomously (in collapsed groups of low, medium and high use of strengths) and continuously.

**Job Satisfaction** was measured with four evaluative statements selected from the 18-item measure from Brayfield & Rothe (1951).

**Organizational Engagement** was measured with the six-item Organizational Engagement Scale (Saks, 2006).

**Life Satisfaction** was measured with the Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985).

**Intention to Quit** was measured with the 3-item Intent-To-Quit Scale (Colarelli, 1984).

Other variables included age, gender, educational achievement (measured as cumulative GPA), annual income, years since graduation, current job position and size of organization (measured as number of employees and annual revenue).

### Intervention

Marketing alumni took CliftonStrengths and then took a second survey.

### Results

*Academic:* Strength domains (Executing, Influencing, Relationship Building, Strategic Thinking) not associated with time to complete marketing degree, time to obtain first job after graduation, job focus, annual income or company size. Respondents in this study were approximately equally distributed across the four strength domains.

*Work:* Use of strengths was significantly and positively associated with:

- Job satisfaction: Low strengths-use respondents had a mean job satisfaction level of 4.06, while high strengths-use respondents had a mean job satisfaction of 6.28.
- Organization Commitment: Low strengths-use respondents had a mean organization commitment of 3.86, while high strengths-use respondents had a mean organization commitment of 5.63.
- Life Satisfaction: Low strengths-use respondents had a mean quality of life of 5.09, while high strengths-use respondents had a mean of 5.94.

It was also significantly and negatively associated with intention to quit (low strengths-use respondents had a mean intention to quit of 4.25, while high strengths-use respondents had a mean intention to quit of 1.90). There were also some differences among strength domains in organizational commitment and quality of life.

# White (2021)

## Assessment of strengths-based interventions on first-year medical students

**Study Type:** Experimental Research

### Abstract

In the quest for a doctoral degree many candidates fail to meet their milestone accomplishment. It is estimated that approximately 30% of individuals who pursue a doctoral degree will not finish. Medical school has been found to be a very intensive program to pursue for many who begin the journey. Despite its difficulty, 81.6 to 84.1% of medical students achieve the status of medical practitioner, within a three-to-four-year program. Despite the seemingly high completion rate, the achievement gap has further implications on physician shortage. The researcher conducted a quantitative study to determine the impact training first-year medical students using the *CliftonStrengths* assessment would have on resiliency, self-efficacy and academic performance at a large Midwestern medical university. The participants consisted of two groups ( $n = 87$ ), 30 untrained participants and 57 trained participants. An independent  $t$ -test was conducted and used to calculate resiliency, self-efficacy, and academic performance on two course grades. All test data were analyzed, and the results found no outcomes to be statistically significant. The current study is the first known to be conducted with students in a medical school setting utilizing the *CliftonStrengths* assessment. Future studies utilizing a larger population of participants, particularly over a longer period of time that incorporates the full three-year or four-year curriculum within medical school education is encouraged.

### Sample

First-year medical students ( $n = 87$ ) at a large, public medical school in the Midwestern U.S. All first-year medical students were invited to participate. Participants at two satellite campuses ( $n = 57$ ) were assigned to the treatment group, and participants at other campuses ( $n = 30$ ) were assigned to the control.

### Research Questions

Does a strengths-based intervention improve the self-efficacy, resilience and academic performance of first-year medical students?

### Methods

At the end of the semester, participants were sent a post-test survey on Qualtrics. Treatment and control groups were compared using an independent samples  $t$ -test.

**Self-Efficacy** was measured with the 12-item Sherer Modified Self-Efficacy Scale (Henry, 2016).

**Resilience** was measured with the eight-item Duckworth Short Grit Scale (Duckworth & Quinn, 2009), which measures two components: passion and perseverance.

**Academic Basic Science Course Scores** came from exam grades of two basic science courses. Scores were obtained for the first exam that took place after the strengths training workshops.

### Intervention

Participants in the treatment group attended a beginning-of-semester workshop where they took the *CliftonStrengths* assessment and then received training and feedback. Students used their *Strengths Insight Guide* to define how themes are related to self-efficacy and resiliency and engaged in the Name It!, Claim It!, Aim It! activity. A second workshop toward the end of the semester discussed the four domains and how the themes can be incorporated into medical school team activities.

The control group was emailed the Body-Mind-Spirit Wellness Behavior and Characteristic Inventory (Hey et al., 2006). They did not receive any training or feedback.

## Results

There were no significant differences between the exam scores, self-efficacy and resiliency of those who received strengths training and those who did not.

Qualitative responses suggested that treatment students gained strengths awareness and that they sought to apply that awareness to their semester activities. Some qualitative responses indicated that students wanted more guidance on how to apply and develop their strengths beyond simply identifying them. Answers also suggest that strengths awareness was useful to students for stress management.

# Yilmaz & Akpınar (2020)

**Strengths-based approaches and its effect on attendance, academic achievement and EFL motivation**  
**Study Type:** Experimental Research

## Abstract

The purpose of this study is to examine the effect of Strengths Based Approach (SBA) on attendance, academic achievement, and student motivation in English class. For this purpose, an experimental study was carried out with freshman students at a state university in Turkey in the spring term of 2011-2012 academic year. The sampling of the study consisted of 66 students in total, 33 students in experimental group and 33 students in control group. Pretest posttest quasi-experimental design with a control group was used in the study. Clifton StrengthsFinder was used to determine the talent themes of students. The data on the motivation levels of students were obtained through the motivation scale, which was adapted from Attitude/Motivation Test Battery developed by Gardner (1985). The data regarding the attendance percentages of students in English class were obtained from attendance sheets taken by the researcher weekly. Students' exam scores in mid-term and final exams administered by the researcher in both terms were taken into consideration for the academic achievement of students. The study indicated that the most frequently encountered talent themes were restorative ( $f=16$ ), responsibility ( $f=11$ ), deliberative ( $f=9$ ), ideation ( $f=9$ ) and learner ( $f=9$ ) respectively. Also, SBA affected the attendance rates of students positively in favour of experimental group; however, it didn't have a significant effect on students' academic achievement and motivation levels. It is considered important to study SBA, which is a fairly new area of study for both the world and Turkey.

## Sample

First-year students ( $n = 66$ ) in Economics and Administrative Sciences at a state university in the Western Black Sea region of Turkey.

## Research Questions

What is the effect of a strength-based approach (SBA) on attendance, academic achievement and motivation of Turkish college students in an English as a Foreign Language (EFL) class?

## Methods

Students were assigned to the treatment or control group. Attendance was measured by the EFL instructor, academic achievement by EFL mid-term and final exam scores, and the pre-test and post-test measured students' self-reported EFL motivation (attitude, motivational intensity and desire to learn the language). Researchers compared treatment and control group outcomes using  $t$ -tests.

**Academic Achievement** was measured by midterm and final exams.

**Attendance** was measured by a sign-in attendance list over a 10-week period.

**Motivation to Learn English** was measured by the EFL motivation scale and included three sub-scales (attitude toward learning English, motivational intensity and desire to learn English) (Gardner, 1985).

## Intervention

The treatment group ( $n = 33$ ) completed the CliftonStrengths assessment and strengths-based sessions over 10 weeks. Thirty minutes of each two-hour class were devoted to strength-based sessions, which included various activities ("StrengthsQuest: Curriculum Outline and Learning Activities developed by Anderson (2003), StrengthsQuest Guide: Introducing Strengths-based Development and StrengthsQuest to Higher Education prepared by Braskamp (2006) and StrengthsQuest Activity Book prepared by Gallup in 2008"). The control group ( $n = 33$ ) did not receive intervention.

- Students guessed their strengths before taking the assessment and compared guesses versus results.
- Students read reports and discussed them.

- Students wrote picture strip stories.
- Students wrote talent themes on badges and walked around the room to evaluate mutual strengths.
- Students prepared PowerPoint presentations on comparatives/superlatives using visuals.
- Students commented on what talents they used in a midterm exam.
- Students talked about their themes with three people with whom they are close.
- Students wrote about the most pleasant experiences in their lives and associated them with their strengths.
- Students wrote down how they used their talents in life.
- Students compared their strengths and similarities/differences to Steve Jobs' profile.
- The researcher shared his strengths and explained how he used them in life.
- Students wrote their greatest life successes and associated them with strengths.
- Students talked about how they used strengths throughout the semester.

## Results

**Attendance:** Before the intervention, the experiment and control groups had similar attendance rates during the fall semester. However, after the intervention (spring semester), the group who received a strengths-based approach attended class at a significantly higher rate than students in the control group (i.e., 67.9% attendance for the strengths-based students, compared to 58.8% for the control group).

**Motivation to Learn English:** Results on the pre-test or post-test did not significantly differ across the treatment and control groups.

**Academic Achievement:** Results on the final exam did not significantly differ across the treatment and control groups.

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